CLAIMS

1. Face detection apparatus generating an output indicative of the likelihood of test regions of a test image containing a face, the apparatus comprising:

means operable to compare a test region with face data indicative of the presence of a face in such a way as to detect plural respective likelihood values indicative of the likelihood of the test region containing a face of a group of respective different face sizes; and

control means, responsive to metadata associated with the image defining one of a set of predetermined classifications of the image, for modifying the group and/or the likelihood values in dependence upon a face size or range of face sizes appropriate to the classification of that image.

2. Apparatus according to claim 1, in the control means is operable to weight the likelihood values so as to enhance the detected likelihood of a face of a size appropriate to the classification of that image.

3. Apparatus according to claim 1, in which the control means is operable to select a subset of the group of different face sizes for the testing of the test region, the subset being dependent upon a face size or range of face sizes appropriate to the classification of that image.

4. Apparatus according to any one of the preceding claims, comprising means for detecting whether the likelihood value indicative of the greatest likelihood exceeds a threshold likelihood value.

5. Apparatus according to any one of the preceding claims, in which:
the image is part of a video sequence; and
the predetermined classifications include video programme types.

6. Apparatus according to any one of the preceding claims, in which the comparing means is operable:
to derive a set of attributes from respective blocks of the region;
to compare the derived attributes with attributes indicative of the presence of a face; and

to derive a probability of the presence of a face by a similarity between the derived attributes and the attributes indicative of the presence of a face.

7.   Apparatus according to claim 6, in which the attributes comprise the projections of image areas onto one or more image eigenblocks.

8.   Video conferencing apparatus comprising apparatus according to any one of the preceding claims.

9.   Surveillance apparatus comprising apparatus according to any one of the preceding claims.

10.   Display apparatus comprising:
        a display screen;
        a video camera; and
        apparatus according to any one of the preceding claims;
        the video camera and the face detection apparatus being arranged with respect ot the display screen so as to detect faces of those looking at the display screen.

11.   A method of face detection apparatus for generating an output indicative of the likelihood of test regions of a test image containing a face, the method comprising the steps of:
        comparing a test region with face data indicative of the presence of a face in such a way as to detect plural respective likelihood value indicative of the likelihood of the test region containing a face of a group of respective different face sizes; and
        in response to metadata associated with the image defining one of a set of predetermined classifications of the image, modifying the group and/or the likelihood values in dependence upon a face size or range of face sizes appropriate to the classification of that image.

12.   Computer software having program code for carrying out a method according to claim 11.

13.   A providing medium for providing program code according to claim 12.

14.   A medium according to claim 13, the medium being a storage medium.

5   15.   A medium according to claim 13, the medium being a transmission medium.

16.   Face detection apparatus generating an output indicative of the likelihood of test regions of a test image containing a face, the apparatus comprising:

        a comparator to compare a test region with face data indicative of the presence of a
10 face in such a way as to detect plural respective likelihood values indicative of the likelihood of the test region containing a face of a group of respective different face sizes; and

        a controller, responsive to metadata associated with the image defining one of a set of predetermined classifications of the image, to modify the group and/or the likelihood values in dependence upon a face size or range of face sizes appropriate to the classification of that
15 image.